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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/708,652

03/17/2004

Alan Smithies

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27128

7590

05/30/2006

BLACKWELL SANDERS PEPER MARTIN LLP  
720 OLIVE STREET  
SUITE 2400  
ST. LOUIS, MO 63101

EXAMINER

CAMERON, ERMA C

ART UNIT

PAPER NUMBER

1762

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/708,652

Applicant(s)

SMITHIES, ALAN

Examiner

Erma Cameron

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16,17 and 19-21 is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Response to Amendment***

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 726348.

'348 teaches applying a stiffening agent such as PAI (3:14-17) to a porous fibrous substrate such as an aramid substrate (see Example 1) to make a filter.

The material is then pleated at 200-250 degrees C (328-418 degrees F) (4:39-41). The operating temperature is as low as 200 degrees C (328 F) (2:33-39) or as high as 365 C (625 F).

If the pleating occurred at 250 degrees C (418 F) and the operational T is 240 C (400F), the process of '348 meets both the application (operational) T over 375 F and pleating at a higher T than the operating T.

The application amount is 2.5 to 23% of the weight of the fabric (see Table 2) which overlaps with applicant's claimed range.

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Because '348 uses the same materials and forms the filter by the same processes, the filter formed by '348 must inherently possess the same capabilities as applicant's claimed filter, including the ability to withstand the same number/condition of cleaning pulses.

The applicant has argued that '348 uses an aqueous dispersion, not a solution as is now claimed in independent claims 1 and 9. The examiner disagrees. Table 1 shows both a solution and aqueous dispersions used in the process.

3. Claims 2 and 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 726348 taken in view of Fukata (4454189) or EP 1096057.

'348 is applied here for the reasons given above.

'348 fails to teach the calendaring step.

'057 teaches a calendaring step for fabric that is to be used to make a filter, both to adjust the thickness and to compact the fibers at the surface ([0054]).

'189 teaches calendaring fabric that will be made into a filter to compact it and give it wet strength (4:20-29, 7:11-15).

It would have been obvious to one of ordinary skill in the art to have added the calendaring step of '057 or '189 to the '348 process because of the advantages the calendaring process adds – adjusting thickness, compacting the fabric and giving it wet strength.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. The rejection of Claims 1-15 and 19 under 35 U.S.C. 112, first paragraph, is withdrawn because of the amendment filed 3/29/2006.

***Drawings***

6. The drawings submitted 3/29/2006 are accepted.

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***Claim Objections***

7. The objection to Claims 15 and 21 is withdrawn because of the amendment filed 3/29/2006.

***Allowable Subject Matter***

8. Claims 16-17 and 19-21 are allowed.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erma Cameron whose telephone number is 571-272-1416. The examiner can normally be reached on 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**ERMA CAMERON**  
**PRIMARY EXAMINER**

Erma Cameron  
Primary Examiner  
Art Unit 1762

May 28, 2006